

We claim:

1. A seating unit comprising:

a base, a seat, a back, and a control operably supporting the seat and the back on the base for synchronous movement as the back is moved between upright and recline positions;

the control including a housing, a first mechanism providing a biasing supporting force  
5 to the back during recline, and a booster spring mechanism for increasing the supporting force;

an on/off selector device for selectively activating and deactivating the booster spring mechanism includes a stop member slidably mounted to the housing and that is movable to a disengaged first position for deactivating the booster spring mechanism and an engaged second position for activating the booster spring mechanism; and

10 the booster spring mechanism operably connected to the back for rotation therewith during recline of the back, the booster spring mechanism defining an axis of rotation and including an arm extending from the axis of rotation that freely rotates when the stop member is in the disengaged first position, but that engages the stop member to tension the booster spring mechanism upon recline of the back.

2. The seating unit defined in claim 1, wherein the on/off selector device includes a cable for moving the stop member between the engaged and disengaged positions.

3. The seating unit defined in claim 2, wherein the control further includes a link that rotates with the back during recline, and wherein the stop member includes a first step shaped to operably selectively engage the link to limit recline of the back when the link is moved to a third position.

4. The seating unit defined in claim 3, wherein the first step, when engaged with the link, limits the back to a partial recline position.

5. The seating unit defined in claim 4, wherein the stop member includes a second step that, when engaged with the link, limits the back to a zero recline.

6. The seating unit defined in claim 5, wherein the on/off selector device includes a manually operable hand control.

7. The seating unit defined in claim 6, wherein the hand control includes a detent device operably engaging the hand control.

8. The seating unit defined in claim 1, wherein the stop member is slidably mounted within the housing for lateral sliding movement.

9. The seating unit defined in claim 1, including a link operably coupled to the base and to the seat.

10. The seating unit defined in claim 1, including a pivot pin keyed to and supporting the link; and wherein the booster spring mechanism includes a torsion spring keyed to the pivot pin, the torsion spring having a protrusion, and wherein the on/off selector device engages the protrusion to activate the torsion spring.

11. In a seating unit having a base, a seat, a back adapted to pivot between upright and reclined positions, an energy mechanism for biasing the back toward the upright position, a first adjustment mechanism for adjusting a first control member on the chair, and a second mechanism for adjusting a second control member on the chair, the improvement comprising:

5 a single actuator operably coupled to both the first adjustment mechanism and the second mechanism for selectively operating both said mechanisms together or one at a time.

12. The seating unit defined in claim 11, wherein the first mechanism includes an energy adjustment mechanism for biasing the back, and the second mechanism includes a back stop mechanism for limiting recline of the back.

13. The seating unit defined in claim 12, wherein the actuator includes a stop member that, when in a first position is totally disengaged, but when in a second operative position, engages both the energy adjustment mechanism and back stop mechanism.

14. The seating unit defined in claim 12, wherein the stop member is movable to a disabled position where the actuator disengages from the energy adjustment mechanism and from the back stop mechanism.

15. A seating unit comprising:

a base, a back, and an underseat control operably coupled to and supporting the back for movement between upright and reclined positions, the control including a housing and an adjustable component and an actuator for adjusting the adjustable component;

5 the actuator including a handle for operating the stop member and an over-torque mechanism connecting the handle to the adjustable feature; and

the over-torque mechanism being configured to release and prevent damage to the stop member and to the actuator and to the adjustable component when a damaging excessive force is transmitted by the handle but when the stop member is prevented from moving.

16. The seating unit defined in claim 15, including a cable having a first end connected to the stop member and a second end connected to the handle.

17. The seating unit defined in claim 15, including a detent associated with the handle and operably engaging the handle to generate uneven forces upon rotation of the handle so as to provide a detented feel to a seated user.

18. The seating unit defined in claim 15, wherein the over-torque mechanism operates in two directions.

19. The seating unit defined in claim 15, wherein the actuator includes a detent for holding the handle in a newly selected position even though the adjustable component temporarily

cannot be moved, and wherein the over-torque mechanism is configured to bias the adjustable component to a position corresponding to the newly selected position when the adjustable component is able to be moved.

20. The seating unit defined in claim 15, wherein the underseat control includes a housing with walls defining a cavity opening downwardly and a cover for closing the cavity; the stop member being positioned within the cavity and adjustably mounted on at least one rod therein.

21. A back for a seating unit comprising:

a back frame including side frame members;

flexible primary supports extending between the side frame members and that are configured to flex to provide comfortable support to a seated user;

5 a covering that extends between the side frame members and that covers the side frame members and the flexible support members; and

a lumbar device located behind the covering in a lumbar area of the side frame members, the lumbar device including flexible secondary supports that extend between the side frame members to supplement a supporting force of the primary support wires in a selected  
10 location, and including a tube of fabric encapsulating a longitudinal portion of the secondary support wires.

22. A seating unit comprising:

a back frame having a top frame section extending across the back frame;

a headrest mount adjustably attached to the back and defining a horizontal pivot axis;  
and

5 a headrest adjustably attached to the headrest mount;

the headrest mount including first and second elongated structural components that engage upper and lower surfaces of the top frame section in a clamping arrangement that distributes stress from the headrest across the top frame section.

23. The seating unit defined in claim 22, wherein the headrest is adjustably attached to the headrest mount for rotation about a horizontal pivot axis to provide support to a seated user's head at different locations relative to the front support surface of the back, the headrest including a shell with a pair of spaced-apart projections, the mount including a transverse tube  
5 section that fits between the projections and further including a bearing member fit between each end of the tube section and an associated one of the projections, the bearing members being non-rotatably secured to the projections, the mount including a detent comprising a resilient detent fixed to one of the tube section and the bearing members and further comprising a detent surface on the other of the tube section and the bearing members for  
10 detentingly engaging the resilient detent as the headrest is adjustably rotated.

24. The seating unit defined in claim 22, including a chair control, and wherein the back frame has an upper portion adapted to provide support to a seated user, and including curvilinear legs that extend downwardly and forwardly from the back frame for pivotally supporting the back frame on the chair control;

5 the legs each including an end section having a first C-shaped cross section defining a first cavity that is open in an inboard direction, a second section adjacent the end section and a third section adjacent the second section, the second section having a second C-shaped cross section defining a second cavity that is open in a downward direction, and the third section having a third C-shaped cross section defining a third cavity that is open in a forward  
10 direction;

the legs each including a continuous wall that extends a length of the legs and that forms a top of the first C-shaped cross section and that forms a top of the second C-shaped cross section and that forms a rear of the third C-shaped cross section.

25. The seating unit defined in claim 22, wherein the back frame includes side frame members and top and bottom frame members defining an open interior region, the side frame members being curvilinear to form a forwardly-protruding lumbar region;

flexible wires extending across the back frame and having ends operably supported by  
5 the side frame members for movement; and

a covering attached to the back frame and tensioned between the top and bottom frame members, the covering including a lumbar section that, due to the tension between the top and bottom frame members, is drawn rearwardly in a center area, which in turn, bends and pretensions the flexible wires located in the lumbar region.

26. The seating unit defined in claim 22, wherein the back frame includes side frame members and top and bottom frame members defining an open interior region, the side frame members being curvilinear to form a forwardly-protruding lumbar region; the top and bottom frame members including top and bottom attachment channels;

5 flexible supports extending across the back frame and having ends operably supported by the side frame members for movement; and

a covering assembly including a perimeter-defining molding, a cushion, and a covering; the perimeter-defining molding including a top hook flange shaped to releasably securely fit into the top attachment channel, and further including a bottom hook flange shaped to  
10 releasably securely fit into the bottom attachment channel; the top and bottom hook flanges, when attached to the back frame causing tension to the covering assembly in the lumbar region which in turn tensions the covering to more securely retain the top and bottom hook flanges in engagement with the top and bottom channels.

27. The seating unit defined in claim 22, wherein the back frame includes side frame members and top and bottom frame members defining an open interior region, the side frame members being curvilinear to form a forwardly-protruding lumbar region;

flexible supports extending across the back frame and having ends operably supported  
5 by the side frame members for movement; and

a covering assembly including a perimeter-defining molding, a cushion, and a covering; the perimeter-defining molding including top and bottom sections that are attached to the top and bottom frame sections; the perimeter-defining molding further including at least one protrusion on each side that engages a mating feature on the side frame members to control  
10 edges of the covering assembly so that the edges align with an outer surface of the side frame members, whereby the edges of the covering do not become undesirably misaligned with the

side frame members of the back frame, even when the flexible supports are flexed and even when a seated user moves to create lateral shifting forces on the cushion assembly.

28. The seating unit defined in claim 22, including a seat having a seat frame with side frame members and a cross beam secured together to form a U-shaped seat support; the side frame members each having a surface forming a linear bearing support and an integral track-forming flange;

5 a seat assembly including a molded shell and side components attached to sides of the molded shell, the side components including second flanges slidably interfitting the track-forming flanges and including a mating surface adapted to slide along the bearing support; and

a seat depth adjuster including a latching device operably mounted to the seat assembly and configured to engage notches in the side frame members.